NAVAL AIR DEVELOPMENT CENTER

WARMINSTER, PA. 18974

REPORT CONTROL SYMBOL NADC 13920-2 1 NOV 1973

STATISTICAL REVIEW OF COUNTING ACCELEROMETER DATA FOR NAVY AND MARINE FLEET AIRCRAFT FROM 1 JAN 1962 TO 1 JUL 1973

SEMI-ANNUAL SUMMARY REPORT

AIRTASK A53530/202/78012-74-84
Work Unit No. 01

Approved for public release; distribution unlimited.

1 OF 1

AD NUMBER: B130189

FIELDS AND GROUPS: 1/2, 1/3, 20/11

ENTRY CLASSIFICATION: UNCLASSIFIED

CORPORATE AUTHOR: NAVAL AIR DEVELOPMENT CENTER WARMINSTER PA

UNCLASSIFIED TITLE: STATISTICAL REVIEW OF COUNTING ACCELEROMETER DATA FOR NAVY AND MARINE FLEET AIRCRAFT FROM 1 JANUARY 1962 TO 30 JUNE 1988.

TITLE CLASSIFICATION: UNCLASSIFIED

DESCRIPTIVE NOTE: SEMI-ANNUAL SUMMARY REPT. 1 JAN 62-30 JUN 88
,

PERSONAL AUTHORS: LIN, DAVID H.

REPORT DATE: NOV 01, 1988

PAGINATION: 153P MEDIA COST: $ 11.00 PRICE CODE: AB

REPORT NUMBER: NADC-13920-2

REPORT CLASSIFICATION: UNCLASSIFIED

SUPPLEMENTARY NOTE: SUPERSEDES PREVIOUS ISSUES OF THE SEMIANNUAL REPT.

LIMITATIONS (ALPHA): DISTRIBUTION AUTHORIZED TO U.S. GOV'T. AGENCIES AND THEIR CONTRACTORS; ADMINISTRATIVE/OPERATIONAL USE
; 1

NOV 88. OTHER REQUESTS SHALL BE REFERRED TO COMNAVAIRDEVCEN, WARMINSTER, PA 18974-5000.

DESCRIPTORS: *ACCELERATION, *ACCELEROMETERS, *AIRCRAFT,

<<P FOR NEXT PAGE>> OR <<ENTER NEXT COMMAND>>

DEPARTMENT OF THE NAVY
NAVAL AIR DEVELOPMENT CENTER
WARMINSTER, PA. 18974

AIR VEHICLE TECHNOLOGY DEPARTMENT

REPORT CONTROL SYMBOL NADC 13920-2 1 NOV 1973

STATISTICAL REVIEW OF COUNTING ACCELEROMETER DATA FOR NAVY AND MARINE FLEET AIRCRAFT FROM 1 JAN 1962 TO 1 JUL 1973

SEMI-ANNUAL SUMMARY REPORT
AIRTASK A53530/202/78012-74-84
WORK UNIT NO. 01

This report provides a specialized summary of normal acceleration data recorded by counting accelerometers. Data are separated by calendar time and major category of fleet experience. Only data reported in the counting accelerometer program are included.

Reported by: Thomas DeFiore
THOMAS A. DE FIORE
Mathematician

Approved by: C G Weeber
C. G. WEEBER, Supt.
Structures Division

SUMMARY

This is a semi-annual progress report, and it presents a specialized summary of the data in the counting accelerometer program. Statistics describing Navy and Marine aircraft cumulative g-count exceedances are calculated and tabulated. These tabulations are separated by calendar time and into four major categories of fleet experience: Navy Training, Navy Combat, Marine Training, and Marine Combat.

These data show that the load rate distributions (counts at 1000 hours) for most models and most g-levels have a non-normal distribution. Within a model (F-4B, F-8H, etc.) differences in the average load rates exist when data are separated by calendar time or mission category.

SPECIAL NOTES

1. This report supersedes and replaces all previous issues of this semi-annual report. (Previous issue report control symbol NADC-13920-2 dated 1 May 1973.

2. Additional copies of this report may be obtained from:

Administrator
Defense Documentation Center for Scientific
and Technical Information (DDC)
Building 5, Cameron Station
Alexandria, Virginia 22314

3. Any inquiries, questions, or additional information desired concerning the contents of this report shall be directed to:

Naval Air Development Center
Air Vehicle Technology Department (30322)
Warminster, Pa. 18974
Area Code 215 OS 2-9000 (Ext. 2896)
Autovon 441-2896

TABLE OF CONTENTS

INDEX OF CURRENTLY OPERATIONAL MODELS

INDEX OF OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS (APPENDIX A)

* TRANSDUCER LOAD-LEVEL RANGE (4-, 5-, 6-, 7-g)

** TRANSDUCER LOAD-LEVEL RANGE (6-, 7-, 8.5-, 10-g)

INTRODUCTION

The NAVAIRDEVCEN (Naval Air Development Center) is engaged in various flight maneuver-loads programs as assigned by the Naval Air Systems Command. One of these is the counting accelerometer program, and under this program data have been collected and reported since 1955.

The primary purpose of this program is to provide the flight load history of individual Navy and Marine aircraft. Other purposes include, but are not limited to, the comparison of operational loads environment with structural design requirements, the comparison of load histories of one model with another, and the determination of expected loads environment of future models. More recently, however, these data are used as the major input in the NAVAIRDEVCEN Aircraft Structural Fatigue Life Program in estimating structural fatigue damage for those aircraft which do not have counting accelerometer data.

DISCUSSION

This is a semi-annual progress report and includes statistical summaries for all Navy and Marine aircraft (whether they are currently in service or out of service) which have reported in the counting accelerometer program. Out-of-service models or models which have not reported counting accelerometer data during the previous 12 months appear in Appendix A. The summary for each out-of-service model is its final summary. New models are added as their counting accelerometer data become available.

For each model, the following statistics are presented: (See Appendix B for the statistical procedures.)

$\bar{x}$ - the estimated mean load exceedances (counts at 1000 flt. hrs.) for each g-level recorded on the counting accelerometer.

S - estimated standard deviation (counts at 1000 flt. hrs.) of the load exceedances for each g-level.

A_3 - estimated skewness factor for the load exceedance distribution.

Two statistical summaries describing cumulative g-count exceedances and flight hours for each currently operational model are presented:

1. The first summary includes all quality-control accepted data reported in the time period comprising the terminal date of this report and the 12 months preceding that date.

2. The second includes all quality-control accepted data reported in the counting accelerometer program from the day each airplane was delivered for service to the terminal date of this report.

The first summary, which includes only the most recent 12 months, shows an indication of a model's current severity of usage. The second summary describes the severity of loads experienced by all airplanes of each model since acceptance. A comparison of the first summary with the second shows whether current usage for any model is more or less severe than usage over its full lifetime.

A further breakdown by mission category is provided. These are provided for each airplane model in both of the aforementioned summaries. These categories are defined as follows:

1. Navy Training - an airplane in a Navy squadron assigned to a non-combat zone. (This includes all Navy airplanes not classified as being in a combat zone.)

2. Navy Combat - an airplane in a Navy squadron assigned to a combat zone.

3. Marine Training - an airplane in a Marine squadron assigned to a non-combat zone. (This includes all Marine airplanes not classified as being in a combat zone.)

4. Marine Combat - an airplane in a Marine squadron assigned to a combat zone.

The statistics for the F-4J Blue Angels are separated into solo aircraft and diamond formation aircraft. In the subsequent tables, the total flight hours shown for a given model are the sum of the hours reported for each category. However, summing the number of airplanes reporting in each category can result in a number exceeding the total aircraft, because the same airplane may have seen service in two or more categories. Its data were separated for calculation of statistics for each respective category.

Some general statistical observations for fleet-wide loads data are the following:

1. The load exceedance distribution for many of the aircraft models is non-normal (particularly asymmetrical) at all the g-levels recorded. In general, the degree of asymmetry increased with increasing g-level.

2. The scatter measure $\frac{S}{\bar{x}}$ (coefficient of variation) increases with higher g-levels.

3. For a given g-level, there is more scatter in loads received during training than during combat.

4. Differences exist in loads frequency among various configurations of the same model and various mission categories within the same configuration.

ACKNOWLEDGEMENT

The author wishes to acknowledge Project Team Members, Messrs. Joseph Caristo and Mark Libeskind of the Air Vehicle Technology Department of the Naval Air Development Center, for their assistance in the preparation of this report.

T A B L E S

Counting accelerometer data are subject to quality control criteria modifications. Thus, in succeeding reports, model-wide summary statistics are subject to change even though a model may no longer be in service.

DATA FROM
07-72 TO 06-73

MODEL F-4J

9 AIRPLANES 1031 HOURS

BLUE ANGELS

NAVY

DIAMOND	6.0G	7.0G	8.5G	10.0G
6 AIRPLANES	$\bar{X}$	328.27	38.89	0.00	0.00
589 HOURS	S	**			
	A_3				

SOLO	6.0G	7.0G	8.5G	10.0G
4 AIRPLANES	$\bar{X}$	923.05	149.96	13.43	10.07
441 HOURS	S	**			
	A_3				

MARINE

	6.0G	7.0G	8.5G	10.0G
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

	6.0G	7.0G	8.5G	10.0G
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 05-73

MODEL F-4J

14 AIRPLANES 7961 HOURS

BLUE ANGELS

NAVY

DIAMOND	6.0G	7.0G	8.5G	10.0G
$\bar{X}$	505.85	166.73	21.41	1.76
S	121.70	82.78	14.01	1.23
A_3	0.17	0.77	0.46	0.50

13 AIRPLANES
5328 HOURS

SOLO	6.0G	7.0G	8.5G	10.0G
$\bar{X}$	2236.20	808.32	147.18	12.88
S	**			
A_3				

10 AIRPLANES
2633 HOURS

MARINE

	6.0G	7.0G	8.5G	10.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

	6.0G	7.0G	8.5G	10.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL KA-3B

7 AIRPLANES 2174 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	21.23	1.16	0.13	0.00
S	**			
A_3				

7 AIRPLANES
2174 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL KA-3B

41 AIRPLANES 31111 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	113.02	14.49	3.13	0.33
S	144.46	16.94	4.68	0.96
A_3	2.77	1.46	1.95	2.83

39 AIRPLANES
28083 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	172.44	30.93	5.69	0.19
S	47.42	17.09	5.41	0.59
A_3	0.51	1.14	0.88	2.69

11 AIRPLANES
3028 HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL EKA-3B

6 AIRPLANES 644 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	0.67	0.00	0.00	0.00
S	**			
A_3				

6 AIRPLANES
644 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL EKA-3B

12 AIRPLANES 7125 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	419.22	77.50	25.46	4.14
S	311.48	67.83	26.70	4.98
A_3	0.20	0.93	1.06	1.07

11 AIRPLANES
5717 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	99.38	6.56	0.00	0.00
S	**			
A_3				

5 AIRPLANES
1408 HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-4F

60 AIRPLANES 7742 HOURS

NAVY

TRAINING	5.00	6.00	7.00	8.00
$\bar{X}$	351.03	30.28	6.31	2.28
S	242.09	37.03	9.85	7.21
A_3	2.25	3.77	4.43	6.21

45 AIRPLANES
5048 HOURS

COMBAT	5.00	6.00	7.00	8.00
$\bar{X}$	0.00	0.00	0.00	0.00
S	**			
A_3				

1 AIRPLANES
57 HOURS

MARINE

TRAINING	5.00	6.00	7.00	8.00
$\bar{X}$	402.05	78.00	7.91	1.67
S	251.01	54.11	4.51	1.13
A_3	1.67	1.87	1.39	1.76

16 AIRPLANES
2637 HOURS

COMBAT	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL H-4F

85 AIRPLANES 32588 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	668.86	109.25	10.53	1.16
S	356.19	71.32	9.95	3.65
A_3	-0.24	1.23	2.19	6.69

75 AIRPLANES
22349 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	532.05	157.13	23.02	4.08
S	105.58	39.10	7.81	2.10
A_3	-0.34	0.25	0.28	0.75

23 AIRPLANES
5718 HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	767.70	151.29	17.37	3.62
S	256.64	54.20	7.14	1.92
A_3	-0.72	-0.53	0.69	1.04

19 AIRPLANES
4521 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL TA-4F

28 AIRPLANES 7026 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	325.92	27.57	2.42	0.91
S	123.22	11.56	2.73	1.95
A_3	0.50	1.08	3.54	4.33

25 AIRPLANES
6469 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	0.00	0.00	0.00	0.00
S	**			
A_3				

1 AIRPLANES
40 HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	1225.04	30.02	0.00	0.00
S	**			
A_3				

3 AIRPLANES
518 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL TA-4F

153 AIRPLANES 164126 HOURS

NAVY

132 AIRPLANES
125718 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	153.86	18.47	1.65	0.19
S	168.06	26.79	2.81	0.76
A_3	2.38	3.57	2.52	4.80

9 AIRPLANES
2115 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	572.20	58.96	3.30	0.75
S	**			
A_3				

MARINE

37 AIRPLANES
36293 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	667.56	82.37	6.94	0.82
S	416.43	35.82	11.44	2.16
A_3	1.50	4.16	3.99	4.63

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-4G

13 AIRPLANES 2328 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	2710.03	376.39	36.18	4.95
S	460.02	57.90	9.88	2.78
A_3	0.22	-0.23	-0.09	1.17

13 AIRPLANES
2328 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL A-4G

15 AIRPLANES 8960 HOURS

NAVY

15 AIRPLANES
8960 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	2370.24	420.86	51.01	5.00
S	477.35	88.32	13.48	2.77
A_3	-0.34	-0.41	-0.63	0.16

COMBAT	5.0G	6.0G	7.0G	8.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	5.0G	6.0G	7.0G	8.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL TA-4J

289 AIRPLANES 102114 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
282 AIRPLANES $\bar{X}$	281.50	28.26	5.21	1.24
99686 HOURS S	119.18	18.80	7.20	3.70
A_3	0.86	1.64	4.32	8.73

COMBAT	5.0G	6.0G	7.0G	8.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
7 AIRPLANES $\bar{X}$	658.36	28.00	6.78	5.68
2427 HOURS S	**			
A_3				

COMBAT	5.0G	6.0G	7.0G	8.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL TH-4J

299 AIRPLANES 152963 HOURS

NAVY

292 AIRPLANES
148275 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	330.28	35.54	4.57	1.01
S	161.80	25.49	7.15	3.54
A_3	2.30	3.36	3.84	7.48

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

MARINE

11 AIRPLANES
4688 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	700.06	23.38	4.41	3.86
S	468.95	19.63	6.89	7.01
A_3	1.18	0.28	1.97	2.10

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-4M

19 AIRPLANES 2265 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	943.43	128.74	25.23	3.43
S	**			
A_3				

2 AIRPLANES
388 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	1421.95	279.22	22.56	1.65
S	188.46	80.67	11.42	3.38
A_3	-0.32	1.25	2.12	2.94

18 AIRPLANES
1876 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 05-73

MODEL A-4M

31 AIRPLANES 4581 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	1337.20	150.50	10.53	2.35
S	**			
A_3				

10 AIRPLANES
755 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	1108.09	207.27	26.14	2.34
S	303.82	119.15	21.07	4.38
A_3	1.19	2.44	2.63	2.70

29 AIRPLANES
3826 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL RA-5C

49 AIRPLANES - 16425 HOURS

NAVY

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	157.95	5.40	0.64	0.45
S	77.65	4.92	1.13	0.94
A_3	1.17	2.06	3.02	4.45

48 AIRPLANES
12716 HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	590.71	40.72	2.94	0.24
S	183.49	15.68	2.64	0.52
A_3	1.05	0.91	3.03	4.09

22 AIRPLANES
3709 HOURS

MARINE

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL RA-5C

129 AIRPLANES 119646 HOURS

NAVY

129 AIRPLANES
98732 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	215.29	15.41	1.11	0.18
S	120.60	29.44	2.05	0.62
A_3	3.11	8.61	3.18	3.41

95 AIRPLANES
20914 HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	933.05	100.10	13.47	0.66
S	435.32	69.94	18.97	1.29
A_3	3.16	3.42	6.45	3.68

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-6A

198 AIRPLANES 43398 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1414.30	524.53	84.51	7.69
S	413.99	195.56	45.91	5.33
A_3	1.42	2.17	2.17	2.18

152 AIRPLANES
25408 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1178.09	514.22	114.47	10.63
S	221.89	130.66	60.97	9.49
A_3	0.89	0.48	1.38	2.56

36 AIRPLANES
6095 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	840.15	202.10	28.43	2.34
S	206.22	84.68	30.77	4.90
A_3	0.93	2.35	5.06	5.09

53 AIRPLANES
9689 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	920.97	373.66	53.59	7.82
S	212.07	160.79	36.42	8.99
A_3	0.63	2.29	2.37	2.59

17 AIRPLANES
3204 HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL A-6A

415 AIRPLANES 339013 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1336.51	428.75	73.95	6.94
S	450.46	214.02	56.66	8.98
A_3	0.54	1.74	3.63	7.38

380 AIRPLANES
197810 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1069.84	446.93	108.93	12.84
S	268.88	153.49	56.49	7.63
A_3	4.30	4.63	3.34	2.06

197 AIRPLANES
38646 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	890.24	216.23	31.14	2.77
S	363.71	121.41	25.61	4.17
A_3	0.82	1.00	1.92	3.21

175 AIRPLANES
76096 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	456.94	149.59	23.35	1.37
S	210.87	110.28	21.44	3.45
A_3	1.10	2.90	3.25	7.09

75 AIRPLANES
26461 HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL EA-6A

13 AIRPLANES 3654 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.00	5.00	6.00	7.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

13 AIRPLANES / 3555 HOURS	TRAINING	4.00	5.00	6.00	7.00
	$\bar{X}$	42.77	1.49	0.00	0.00
	S	11.87	1.07	0.00	0.00
	A_3	-0.93	0.98	0.00	0.00

1 AIRPLANES / 100 HOURS	COMBAT	4.00	5.00	6.00	7.00
	$\bar{X}$	0.00	0.00	0.00	0.00
	S	**			
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL EA-6A

19 AIRPLANES 14226 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

19 AIRPLANES / 13789 HOURS	TRAINING	4.0G	5.0G	6.0G	7.0G
	$\bar{X}$	44.77	4.22	0.17	0.00
	S	22.82	4.58	0.52	0.28
	A_3	1.83	1.56	1.63	4.02

5 AIRPLANES / 438 HOURS	COMBAT	4.0G	5.0G	6.0G	7.0G
	$\bar{X}$	10.56	1.51	0.00	0.00
	S	**			
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-6B

15 AIRPLANES 3628 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
14 AIRPLANES	$\bar{X}$	449.46	91.25	14.93	0.92
3071 HOURS	S	201.14	43.63	10.02	2.95
	A_3	1.12	1.00	1.22	2.23

COMBAT	4.0G	5.0G	6.0G	7.0G
5 AIRPLANES	$\bar{X}$	426.63	106.37	33.28	11.25
557 HOURS	S	**			
	A_3				

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL A-6B

18 AIRPLANES 9218 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	410.54	85.65	15.53	1.97
S	132.98	40.40	13.91	2.90
A_3	0.60	1.18	1.65	2.30

17 AIRPLANES
7297 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	301.71	91.54	9.41	1.92
S	**			
A_3				

10 AIRPLANES
1921 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL EA-6B

16 AIRPLANES 4504 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
16 AIRPLANES $\bar{X}$	62.35	3.84	0.00	0.00
4489 HOURS S	31.51	4.60	0.00	0.00
A_3	1.02	2.73	0.00	0.00

COMBAT	4.0G	5.0G	6.0G	7.0G
2 AIRPLANES $\bar{X}$	60.35	0.00	0.00	0.00
15 HOURS S	**			
A_3				

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 05-73

MODEL EA-6B

20 AIRPLANES 9233 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	55.99	15.82	2.38	0.00
S	68.80	24.27	6.86	0.00
A_3	3.14	3.08	3.74	0.00

20 AIRPLANES
9218 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	60.35	0.00	0.00	0.00
S	**			
A_3				

2 AIRPLANES
15 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-6C

9 AIRPLANES 906 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	602.41	128.49	7.57	1.35
S	**			
A_3				

9 AIRPLANES
763 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	0.00	0.00	0.00	0.00
S	**			
A_3				

1 AIRPLANES
143 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL A-6C

12 AIRPLANES 2887 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	460.37	113.35	6.86	0.33
S	61.89	24.17	4.46	0.62
A_3	-0.85	0.47	0.61	2.57

12 AIRPLANES
2583 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	593.18	316.07	65.16	9.74
S	**			
A_3				

3 AIRPLANES
304 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL KA-6D

49 AIRPLANES 13993 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	93.08	11.41	1.93	0.29
S	62.57	10.00	1.99	0.29
A_3	1.91	3.42	3.03	4.14

47 AIRPLANES
8963 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	21.10	3.19	0.47	0.00
S	11.79	2.98	0.58	0.00
A_3	1.00	2.44	2.16	0.00

22 AIRPLANES
5129 HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-52 TO 06-73

MODEL KA-6D

52 AIRPLANES 30121 HOURS

NAVY

51 AIRPLANES
21496 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	41.39	4.99	0.87	0.18
S	48.41	7.39	1.48	0.46
A_3	3.28	4.58	3.57	4.89

32 AIRPLANES
8625 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	21.61	3.62	0.87	0.00
S	16.26	4.17	1.70	0.00
A_3	1.12	2.40	3.48	0.00

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-6E

29 AIRPLANES 7050 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	656.40	136.53	15.10	1.89
S	168.07	59.64	11.67	3.43
A_3	0.70	0.98	1.44	3.09

29 AIRPLANES
7050 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 05-73

MODEL A-6E

29 AIRPLANES 9596 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	875.28	175.51	19.97	1.99
S	408.70	65.97	18.64	3.25
A_3	3.24	1.84	2.65	2.48

29 AIRPLANES
9596 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-7A

91 AIRPLANES 28176 HOURS

NAVY

	TRAINING	5.00	6.00	7.00	8.00
93 AIRPLANES	$\bar{X}$	927.96	232.92	26.12	2.43
19343 HOURS	S	337.63	124.23	22.58	3.48
	A_3	1.36	1.91	2.71	3.84

	COMBAT	5.00	6.00	7.00	8.00
32 AIRPLANES	$\bar{X}$	971.20	356.20	30.45	1.69
8933 HOURS	S	214.26	110.62	14.30	2.29
	A_3	-0.01	0.62	0.63	3.48

MARINE

	TRAINING	5.00	6.00	7.00	8.00
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

	COMBAT	5.00	6.00	7.00	8.00
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06 73

MODEL A-7A

194 AIRPLANES 245370 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
194 AIRPLANES	$\bar{X}$	1127.18	217.90	22.33	2.27
180786 HOURS	S	429.99	106.60	17.31	2.97
	A_3	0.05	0.63	1.26	2.07

COMBAT	5.0G	6.0G	7.0G	8.0G
133 AIRPLANES	$\bar{X}$	762.38	240.54	32.68	2.62
64584 HOURS	S	160.86	77.46	16.00	2.45
	A_3	0.08	1.49	0.87	1.75

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

COMBAT	5.0G	6.0G	7.0G	8.0G
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-7B

81 AIRPLANES 30583 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	1075.36	320.93	38.81	4.62
S	332.24	126.40	27.44	10.35
A_3	2.43	1.36	2.29	5.02

76 AIRPLANES
21936 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	1306.63	418.21	55.23	3.99
S	357.05	122.25	33.48	4.41
A_3	-0.02	0.93	2.91	3.34

25 AIRPLANES
5647 HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL A-7B

93 AIRPLANES 42423 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
93 AIRPLANES $\bar{X}$	1106.76	315.46	41.13	5.10
33031 HOURS S	408.00	150.34	43.50	11.79
A_3	1.22	1.09	3.95	5.42

COMBAT	5.0G	6.0G	7.0G	8.0G
28 AIRPLANES $\bar{X}$	1321.19	428.20	56.77	4.01
9392 HOURS S	346.79	118.41	33.00	4.54
A_3	-0.00	0.86	3.00	3.59

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	5.0G	6.0G	7.0G	8.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-7C

27 AIRPLANES 10425 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	644.04	95.87	5.56	0.00
S	321.67	54.39	5.11	0.00
A_3	0.86	0.99	2.06	0.00

24 AIRPLANES
2928 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	654.68	149.31	16.68	1.15
S	157.67	35.51	6.69	1.04
A_3	1.57	-0.20	0.18	1.02

21 AIRPLANES
7497 HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL A-7C

30 AIRPLANES 15196 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	325.00	111.10	6.52	0.54
S	255.33	46.14	4.67	0.66
A_3	0.11	0.33	1.56	1.73

29 AIRPLANES
7699 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	554.68	149.31	16.68	1.15
S	157.67	35.51	6.69	1.04
A_3	1.57	-0.20	0.18	1.02

21 AIRPLANES
7497 HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL A-7E

137 AIRPLANES 43732 HOURS

NAVY

TRAINING	5.00	6.00	7.00	8.00
$\bar{X}$	827.31	108.05	5.53	0.65
S	277.68	44.53	4.62	1.35
A_3	1.59	2.37	3.89	5.54

137 AIRPLANES
35907 HOURS

COMBAT	5.00	6.00	7.00	8.00
$\bar{X}$	315.36	62.65	4.96	0.67
S	61.50	20.35	2.97	1.09
A_3	0.00	0.23	1.54	4.20

34 AIRPLANES
7824 HOURS

MARINE

TRAINING	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 05-73

MODEL A-7E

142 AIRPLANES 47426 HOURS

NAVY

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	344.84	113.45	5.82	0.61
S	278.75	44.12	4.53	1.30
A_3	1.29	1.93	3.58	5.58

142 AIRPLANES
39602 HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	315.36	62.65	4.96	0.67
S	61.50	20.35	2.97	1.09
A_3	0.00	0.23	1.54	4.20

34 AIRPLANES
7824 HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 10-06-73

MODEL C-2A

8 AIRPLANES 2415 HOURS

NAVY

8 AIRPLANES
2415 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	24.77	4.81	1.21	0.74
S	**			
A_3				

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 05-73

MODEL C-2A

14 AIRPLANES 40706 HOURS

NAVY

14 AIRPLANES
40706 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	56.02	17.00	7.23	1.76
S	61.22	27.57	13.23	4.01
A_3	2.10	2.04	1.95	1.67

COMBAT	2.0G	2.5G	3.0G	3.5G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	2.0G	2.5G	3.0G	3.5G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL F-4B

206 AIRPLANES 38358 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	2599.57	1067.08	414.77	117.05
S	998.56	490.19	242.47	99.59
A_3	4.35	4.68	4.93	7.01

133 AIRPLANES
15257 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	1206.31	464.08	179.06	47.43
S	336.39	145.29	90.47	39.20
A_3	1.02	1.07	1.35	1.95

30 AIRPLANES
5443 HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	3257.28	1299.42	414.34	116.47
S	912.82	492.04	209.24	83.20
A_3	1.03	1.53	1.66	2.42

69 AIRPLANES
13656 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	2597.44	1162.60	526.29	191.23
S	883.56	315.22	216.01	126.09
A_3	0.70	0.18	0.32	0.87

15 AIRPLANES
4001 HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-4B

611 AIRPLANES 836467 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
573 AIRPLANES	$\bar{X}$	1865.24	637.89	177.47	43.03
430061 HOURS	S	1096.81	496.46	204.54	74.45
	A_3	2.13	2.51	3.90	6.09

COMBAT	4.0G	5.0G	6.0G	7.0G
291 AIRPLANES	$\bar{X}$	1137.73	405.31	129.20	31.32
108405 HOURS	S	372.90	132.70	67.31	31.02
	A_3	2.98	1.94	4.10	8.73

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
329 AIRPLANES	$\bar{X}$	2216.56	710.32	173.39	39.25
191396 HOURS	S	1134.14	491.33	187.70	60.03
	A_3	1.45	1.99	2.52	3.77

COMBAT	4.0G	5.0G	6.0G	7.0G
226 AIRPLANES	$\bar{X}$	2222.87	864.81	226.04	47.48
106604 HOURS	S	694.66	341.03	155.58	51.27
	A_3	1.47	1.21	2.23	4.41

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL RF-4B

28 AIRPLANES 5464 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.00	5.00	6.00	7.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

28 AIRPLANES / 5402 HOURS	TRAINING	4.00	5.00	6.00	7.00
	$\bar{X}$	313.79	94.76	28.11	7.25
	S	128.18	53.64	21.51	5.95
	A_3	1.60	2.12	2.32	2.44

2 AIRPLANES / 62 HOURS	COMBAT	4.00	5.00	6.00	7.00
	$\bar{X}$	1190.76	430.97	126.90	0.00
	S	**			
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL RF-4B

46 AIRPLANES 52691 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	375.61	92.86	20.05	4.88
S	235.14	85.59	23.74	8.58
A_3	1.01	3.05	2.28	3.72

46 AIRPLANES
44676 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1097.24	210.75	41.81	8.94
S	405.94	78.46	26.06	5.37
A_3	1.58	1.80	2.18	1.10

16 AIRPLANES
8015 HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL F-4J

357 AIRPLANES 90384 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	2798.01	1088.23	230.93	58.26
S	842.79	396.22	139.96	42.61
A_3	1.03	1.24	1.57	3.01

267 AIRPLANES
45007 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	1026.91	409.06	127.02	31.43
S	312.57	141.08	56.20	27.29
A_3	3.71	4.47	4.12	5.29

130 AIRPLANES
23900 HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	4200.61	1515.18	439.39	104.78
S	971.91	443.64	206.41	70.32
A_3	0.62	1.04	1.76	3.26

95 AIRPLANES
17325 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	2354.72	1122.88	305.94	47.66
S	375.63	152.03	111.49	29.45
A_3	2.27	0.11	1.03	1.55

18 AIRPLANES
4153 HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-4J

462 AIRPLANES 368761 HOURS

NAVY

422 AIRPLANES
200810 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	3421.09	1294.29	415.52	105.38
S	1684.21	820.05	337.79	107.69
A_3	1.26	1.52	2.11	2.87

175 AIRPLANES
53541 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1103.58	452.57	136.58	34.43
S	342.19	158.01	64.77	37.01
A_3	1.71	2.76	2.63	4.33

MARINE

179 AIRPLANES
105224 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	4795.80	1847.67	605.72	173.16
S	1528.56	647.29	289.91	115.35
A_3	1.09	1.11	1.10	1.63

47 AIRPLANES
9185 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	2863.36	1357.33	433.47	78.72
S	621.22	267.37	171.78	45.79
A_3	2.61	2.13	1.86	1.55

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM 07-72 TO 06-73

MODEL F-4N

10 AIRPLANES 560 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	1362.30	1521.75	1220.00	1254.00
S	**			
A_3				

10 AIRPLANES
560 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL RF-8G

18 AIRPLANES 3318 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	208.34	31.97	3.31	0.71
S	69.48	14.92	4.22	0.70
A_3	0.54	1.15	1.67	1.83

18 AIRPLANES
3185 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	539.33	175.29	89.89	26.97
S	**			
A_3				

2 AIRPLANES
133 HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-4N

10 AIRPLANES 573 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	4251.55	2413.34	1156.94	238.86
S	**			
A_3				

10 AIRPLANES
573 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL RF-8G

34 AIRPLANES 25548 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	469.80	138.80	32.63	4.79
S	221.21	74.56	27.74	8.09
A_3	-0.10	0.34	1.57	4.57

34 AIRPLANES
24356 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1481.32	391.60	63.37	8.37
S	387.16	90.25	26.29	5.98
A_3	1.13	1.89	1.75	1.30

11 AIRPLANES
1192 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06 73

MODEL F-8H

45 AIRPLANES 10243 HOURS

NAVY

45 AIRPLANES
10243 HOURS

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	1523.23	471.07	77.74	10.90
S	349.52	138.11	32.52	7.19
A_3	-0.29	0.56	1.55	2.34

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 08-73

MODEL F-8H

86 AIRPLANES 66563 HOURS

NAVY

86 AIRPLANES
53342 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1526.23	483.68	94.51	12.67
S	506.18	176.70	40.60	8.48
A_3	0.51	0.72	0.25	1.60

45 AIRPLANES
13220 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	711.67	197.56	41.43	6.17
S	254.48	82.47	19.81	4.49
A_3	2.35	2.77	2.28	1.32

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL F-8J

87 AIRPLANES 17699 HOURS

NAVY

82 AIRPLANES
11562 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	2610.66	811.75	142.95	19.91
S	495.23	205.39	42.22	10.13
A_3	0.55	1.40	1.66	1.94

34 AIRPLANES
5637 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1056.71	334.49	78.04	9.03
S	197.06	85.59	24.08	3.19
A_3	0.68	0.04	0.60	2.93

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-8J

134 AIRPLANES 100553 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
134 AIRPLANES $\bar{X}$	2124.87	654.19	123.67	15.21
73310 HOURS S	619.64	224.00	49.12	9.73
A_3	0.64	0.54	0.53	1.15

COMBAT	4.0G	5.0G	6.0G	7.0G
93 AIRPLANES $\bar{X}$	771.14	257.37	54.85	8.28
27243 HOURS S	317.05	138.00	35.50	9.12
A_3	2.49	2.93	2.88	3.73

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL F-8K

46 AIRPLANES 8221 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	2622.75	928.11	157.06	16.75
S	740.69	235.58	51.31	9.95
A_3	0.74	0.72	1.58	2.14

46 AIRPLANES
8221 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-8K

73 AIRPLANES 33489 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
73 AIRPLANES $\bar{X}$	1549.73	477.18	101.32	12.17
33457 HOURS S	728.18	245.49	56.79	8.48
A_3	1.76	2.46	3.63	1.70

COMBAT	4.0G	5.0G	6.0G	7.0G
2 AIRPLANES $\bar{X}$	4829.26	1394.82	324.53	24.96
32 HOURS S	**			
A_3				

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL F-8L

1 AIRPLANES 3 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
1 AIRPLANES $\bar{X}$	0.00	0.00	0.00	0.00
3 HOURS S	**			
A_3				

COMBAT	4.00	5.00	6.00	7.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	4.00	5.00	6.00	7.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.00	5.00	6.00	7.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-8L

36 AIRPLANES 9856 HOURS

NAVY

36 AIRPLANES
9856 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1711.41	498.06	122.95	19.19
S	427.64	204.07	66.52	13.14
A_3	0.81	0.64	1.31	1.17

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL DF-8L

5 AIRPLANES 456 HOURS

NAVY

5 AIRPLANES
456 HOURS

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	740.44	136.16	19.30	6.20
S	**			
A_3				

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 08-73

MODEL DF-8L

5 AIRPLANES 591 HOURS

NAVY

5 AIRPLANES
591 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1028.22	290.68	43.04	3.69
S	**			
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL P-3A

83 AIRPLANES 48766 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	4.70	0.21	0.05	0.00
S	7.20	0.59	0.25	0.00
A_3	3.59	3.30	4.94	0.00

83 AIRPLANES
45411 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	10.16	0.00	0.00	0.00
S	**			
A_3				

7 AIRPLANES
3355 HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL P-3A

151 AIRPLANES 755101 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	19.02	1.79	0.22	0.03
S	39.87	4.83	1.59	0.28
A_3	3.51	6.19	9.41	7.10

150 AIRPLANES
664158 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	12.40	1.10	0.09	0.01
S	14.95	2.36	0.41	0.11
A_3	2.84	2.44	4.00	9.84

101 AIRPLANES
90943 HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL P-3B

114 AIRPLANES 83065 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	3.43	0.27	0.12	0.00
S	5.06	0.79	0.57	0.52
A_3	3.81	4.00	7.03	8.45

114 AIRPLANES
69718 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	4.72	0.43	0.00	0.00
S	4.34	0.73	0.00	0.00
A_3	2.12	3.78	0.00	0.00

47 AIRPLANES
13346 HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL P-3B

124 AIRPLANES 544476 HOURS

NAVY

124 AIRPLANES
459732 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	11.62	1.02	0.12	0.04
S	25.99	2.38	0.45	0.27
A_3	2.29	2.12	1.92	4.81

78 AIRPLANES
85744 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	4.99	0.44	0.03	0.01
S	5.50	0.82	0.15	0.11
A_3	0.63	2.75	5.62	8.37

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL P-3C

55 AIRPLANES 29712 HOURS

NAVY

55 AIRPLANES
29377 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	4.75	0.66	0.09	0.01
S	5.52	1.75	0.49	0.19
A_3	1.60	4.31	4.13	7.20

2 AIRPLANES
335 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	0.00	0.00	0.00	0.00
S	**			
A_3				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL P-3C

55 AIRPLANES 57299 HOURS

NAVY

55 AIRPLANES
56964 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	13.09	0.60	0.07	0.04
S	57.12	2.34	0.43	0.23
A_3	6.53	4.32	3.53	3.92

2 AIRPLANES
335 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	0.00	0.00	0.00	0.00
S	*			
A_3				

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL ES-2D

6 AIRPLANES 1607 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	24.18	1.85	0.73	0.00
S	**			
A_3				

6 AIRPLANES
1607 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL ES-2D

6 AIRPLANES 4265 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	12.04	1.33	0.47	0.00
S	**			
A_3				

5 AIRPLANES
4265 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL S-2E

112 AIRPLANES 39584 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
112 AIRPLANES $\bar{X}$	67.25	11.87	3.13	1.52
39435 HOURS S	173.58	20.92	7.70	5.77
A_3	8.88	4.69	4.02	5.10

COMBAT	2.0G	2.5G	3.0G	3.5G
4 AIRPLANES $\bar{X}$	0.00	0.00	0.00	0.00
148 HOURS S	**			
A_3				

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	2.0G	2.5G	3.0G	3.5G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL S-2E

229 AIRPLANES 553160 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	71.47	12.24	3.09	1.09
S	255.65	25.41	7.21	3.59
A_3	5.64	3.29	2.43	2.65

229 AIRPLANES
524279 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	40.67	7.47	1.14	0.42
S	67.96	7.95	1.70	1.33
A_3	5.07	2.05	2.66	5.00

65 AIRPLANES
28881 HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL S-2G

44 AIRPLANES 15240 HOURS

NAVY

44 AIRPLANES
15240 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	41.83	10.14	2.79	1.66
S	41.49	19.39	8.28	5.25
A_3	1.88	4.27	4.53	3.37

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL S-2G

44 AIRPLANES 19973 HOURS

NAVY

44 AIRPLANES
19973 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	35.69	7.54	1.98	1.19
S	41.02	17.22	7.27	4.59
A_3	1.90	4.18	4.54	3.88

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL S-3A

9 AIRPLANES 1127 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	685.99	238.03	93.77	28.14
S	**			
A_3				

9 AIRPLANES
1127 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL S-3A

9 AIRPLANES 1179 HOURS

NAVY

9 AIRPLANES
1179 HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	615.67	213.63	75.18	25.25
S	**			
A_3				

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

AIRPLANES
HOURS

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL T-2B

72 AIRPLANES 26846 HOURS

NAVY

72 AIRPLANES
26846 HOURS

TRAINING	5.00	6.00	7.00	8.00
$\bar{X}$	223.98	36.98	5.92	1.82
S	190.26	41.28	9.14	3.77
A_3	3.65	4.13	5.47	5.25

COMBAT	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

COMBAT	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL T-2B

90 AIRPLANES 124660 HOURS

NAVY

90 AIRPLANES
124660 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	249.55	28.33	3.35	0.73
S	269.76	43.60	6.12	2.13
A_3	3.11	3.62	4.12	5.81

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL T-2C

20 AIRPLANES 5068 HOURS

NAVY

20 AIRPLANES
5069 HOURS

TRAINING	5.00	6.00	7.00	8.00
$\bar{X}$	56.46	7.58	1.94	1.01
S	38.58	5.70	2.71	1.20
A_3	2.21	1.56	2.32	2.64

COMBAT	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

COMBAT	5.00	6.00	7.00	8.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL T-2C

20 AIRPLANES 5068 HOURS

NAVY

20 AIRPLANES
5068 HOURS

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	56.46	7.58	1.94	1.01
S	38.58	5.70	2.71	1.20
A_3	2.21	1.56	2.32	2.64

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	5.0G	6.0G	7.0G	8.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL T-28B

45 AIRPLANES 17354 HOURS

NAVY

45 AIRPLANES
17354 HOURS

TRAINING	3.00	4.00	5.00	6.00
$\bar{X}$	99.78	32.09	25.98	20.66
S	99.16	40.78	39.95	32.41
A_3	0.20	2.30	3.96	4.09

COMBAT	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

COMBAT	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73.

MODEL T-28B

98 AIRPLANES 404909 HOURS

NAVY

98 AIRPLANES
404909 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	323.83	43.87	5.19	0.32
S	633.30	112.62	22.58	7.80
A_3	1.12	2.34	4.02	8.38

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL T-28C

30 AIRPLANES 9459 HOURS

NAVY

30 AIRPLANES
9459 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	449.09	53.56	2.73	0.92
S	310.91	43.51	3.85	1.95
A_3	0.95	1.49	2.69	4.42

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL T-28C

43 AIRPLANES 154560 HOURS

NAVY

43 AIRPLANES
154560 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	1041.32	136.78	7.91	0.56
S	1279.33	191.80	12.21	1.19
A_3	0.07	0.47	0.84	1.26

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

DATA FROM
07-72 TO 06-73

MODEL T-34B

25 AIRPLANES 15507 HOURS

NAVY

25 AIRPLANES
15507 HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	516.14	59.25	4.51	0.00
S	490.27	60.96	5.19	0.00
A_3	0.49	0.77	1.06	0.00

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

AIRPLANES
HOURS

TRAINING	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

COMBAT	3.0G	4.0G	5.0G	6.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL T-34B

75 AIRPLANES 151359 HOURS

NAVY

75 AIRPLANES
151359 HOURS

TRAINING	3.00	4.00	5.00	6.00
$\bar{X}$	1382.12	284.35	26.89	1.52
S	1327.31	233.13	24.05	5.03
A_3	-0.35	0.11	0.80	7.11

COMBAT	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

APPENDIX A

OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS

ALL DATA
01-62 TO 08-73

MODEL F-11A

12 AIRPLANES 3744 HOURS

NAVY

BLUE ANGELS

TRAINING	4.0G	5.0G	6.0G	7.0G
12 AIRPLANES $\bar{X}$	5414.30	1826.99	520.71	199.94
3744 HOURS S	2263.49	740.91	208.44	89.14
A_3	-0.39	-0.69	-0.79	-0.37

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-11A

11 AIRPLANES 4400 HOURS

NAVY

BLUE ANGELS

TRAINING	6.0G	7.0G	8.5G	10.0G
$\bar{X}$	740.74	192.71	12.43	3.88
S	217.97	62.76	7.33	7.05
A_3	0.19	0.26	0.95	2.32

11 AIRPLANES
4400 HOURS

COMBAT	6.0G	7.0G	8.5G	10.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	6.0G	7.0G	8.5G	10.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	6.0G	7.0G	8.5G	10.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL AF-1E

21 AIRPLANES 4527 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	663.04	125.53	22.27	3.60
S	200.25	52.92	16.14	4.72
A_3	0.29	0.61	1.63	2.00

21 AIRPLANES
4527 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 08-73

MODEL A-1H

28 AIRPLANES 7290 HOURS

NAVY

22 AIRPLANES
374 HOURS

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	263.05	94.29	6.31	0.00
S	42.25	16.64	2.73	0.00
A_3	1.13	0.69	2.05	0.00

28 AIRPLANES
6916 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	322.42	89.29	14.34	0.00
S	77.52	27.19	6.46	0.00
A_3	1.14	1.22	1.07	0.00

MARINE

AIRPLANES
HOURS

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-69 TO 06-73

MODEL A-1J

4 AIRPLANES 917 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
1 AIRPLANES	$\bar{X}$	0.00	0.00	0.00	0.00
32 HOURS	S	**			
	A_3				

COMBAT	4.00	5.00	6.00	7.00
4 AIRPLANES	$\bar{X}$	306.82	125.89	17.28	0.00
885 HOURS	S	**			
	A_3				

MARINE

TRAINING	4.00	5.00	6.00	7.00
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

COMBAT	4.00	5.00	6.00	7.00
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL A-3B

80 AIRPLANES 69204 HOURS

NAVY

80 AIRPLANES
60301 HOURS

TRAINING	2.00	2.50	3.00	3.50
$\bar{X}$	649.10	175.85	55.56	12.41
S	417.74	111.84	45.03	24.05
A_3	1.40	1.18	1.99	6.35

24 AIRPLANES
8903 HOURS

COMBAT	2.00	2.50	3.00	3.50
$\bar{X}$	623.15	187.81	76.93	37.43
S	244.96	120.09	77.16	46.34
A_3	0.61	1.43	2.55	2.96

MARINE

AIRPLANES
HOURS

TRAINING	2.00	2.50	3.00	3.50
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.00	2.50	3.00	3.50
$\bar{X}$	*			
S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 09-73

MODEL A-4B

58 AIRPLANES 23177 HOURS

NAVY

55 AIRPLANES
20376 HOURS

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	681.15	239.03	49.07	7.87
S	358.28	164.65	46.69	9.80
A_3	0.67	1.04	2.09	2.14

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

8 AIRPLANES
2800 HOURS

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	268.45	64.34	10.94	0.98
S	**			
A_3				

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL TA-4B

21 AIRPLANES 8198 HOURS

NAVY

	TRAINING	4.00	5.00	6.00	7.00
21 AIRPLANES	$\bar{X}$	384.01	143.16	41.39	7.28
8198 HOURS	S	416.24	182.80	54.39	12.96
	A_3	1.32	1.56	1.97	2.59

	COMBAT	4.00	5.00	6.00	7.00
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

MARINE

	TRAINING	4.00	5.00	6.00	7.00
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

	COMBAT	4.00	5.00	6.00	7.00
AIRPLANES	$\bar{X}$	*			
HOURS	S				
	A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06 73

MODEL A-5A

30 AIRPLANES 11790 HOURS

NAVY

TRAINING	3.00	4.00	5.00	6.00
30 AIRPLANES $\bar{X}$	579.58	128.26	9.04	0.89
11790 HOURS S	487.22	42.19	4.68	1.00
A_3	4.57	0.57	0.75	1.63

COMBAT	3.00	4.00	5.00	6.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	3.00	4.00	5.00	6.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	3.00	4.00	5.00	6.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL A-5B

5 AIRPLANES 985 HOURS

NAVY

TRAINING	3.00	4.00	5.00	6.00
$\bar{X}$	125.50	13.83	1.01	0.00
S	**			
A_3				

5 AIRPLANES
985 HOURS

COMBAT	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	3.00	4.00	5.00	6.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL KC-130F

12 AIRPLANES 17648 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	2.0G	2.5G	3.0G	3.5G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
12 AIRPLANES $\bar{X}$	8.76	0.42	0.09	0.00
17648 HOURS S	5.79	0.51	0.22	0.00
A_3	-0.38	0.30	1.92	0.00

COMBAT	2.0G	2.5G	3.0G	3.5G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 09-73

MODEL F-4A

27 AIRPLANES 17193 HOURS

NAVY

27 AIRPLANES
17193 HOURS

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	794.95	261.01	66.29	11.89
S	275.55	127.26	42.65	3.70
A_3	0.09	0.33	0.71	1.19

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL TF-4A

4 AIRPLANES 433 HOURS

NAVY

4 AIRPLANES
433 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	135.48	23.72	3.32	0.00
S	**			
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-68 TO 06-73

MODEL F-4C

AIRPLANES 1668 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1026.48	290.88	80.22	17.65
S	146.46	78.80	33.48	11.25
A_3	-0.36	-0.07	0.03	0.30

12 AIRPLANES
7848 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1579.58	589.78	138.67	27.35
S	243.27	132.59	53.36	13.34
A_3	0.80	1.14	1.24	0.97

10 AIRPLANES
2448 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{x}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-6H

46 AIRPLANES 17986 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	190.91	25.88	1.93	0.20
S	143.14	29.94	2.18	0.75
A_3	2.41	2.60	1.96	2.92

29 AIRPLANES
12399 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	147.15	17.74	0.53	0.00
S	82.97	7.42	0.68	0.00
A_3	1.24	0.00	2.11	0.00

26 AIRPLANES
5587 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-8A

48 AIRPLANES 33043 HOURS

NAVY

48 AIRPLANES
33043 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	678.64	171.70	32.28	5.44
S	330.20	100.28	22.83	4.33
A_3	0.32	0.58	0.75	1.38

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL RF-8A

28 AIRPLANES 20290 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	317.32	80.22	13.37	2.05
S	120.58	36.11	7.56	1.88
A_3	0.56	0.52	0.61	1.90

23 AIRPLANES
15203 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	221.00	34.00	5.73	5.73
S	**			
A_3				

4 AIRPLANES
355 HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	151.04	28.24	4.41	0.56
S	**			
A_3				

10 AIRPLANES
4726 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	0.00	0.00	0.00	0.00
S	**			
A_3				

1 AIRPLANES
6 HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL TF-8A

30 AIRPLANES 4924 HOURS

NAVY

30 AIRPLANES
4924 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1274.72	393.67	82.63	14.88
S	354.70	139.02	33.41	6.09
A_3	0.88	2.10	2.48	0.98

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 08-73

MODEL F-8B

53 AIRPLANES 40015 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	813.00	203.68	34.52	3.65
S	316.12	100.90	23.43	3.94
A_3	0.99	1.13	1.73	2.98

46 AIRPLANES
29272 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	778.09	148.63	19.24	2.49
S	188.70	53.00	9.18	2.34
A_3	1.26	1.68	1.46	2.06

36 AIRPLANES
10743 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-8C

87 AIRPLANES 76054 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
78 AIRPLANES	$\bar{X}$	875.42	217.67	38.78	4.89
53012 HOURS	S	534.39	164.74	37.06	6.76
	A_3	1.20	1.14	1.60	2.57

COMBAT	4.0G	5.0G	6.0G	7.0G
11 AIRPLANES	$\bar{X}$	848.92	194.84	49.77	6.46
1689 HOURS	S	575.01	119.04	27.36	6.78
	A_3	0.22	0.30	0.17	1.45

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
37 AIRPLANES	$\bar{X}$	1217.83	346.89	67.32	10.17
20851 HOURS	S	370.14	107.60	22.36	4.73
	A_3	1.83	1.60	1.66	0.95

COMBAT	4.0G	5.0G	6.0G	7.0G
11 AIRPLANES	$\bar{X}$	748.69	333.97	61.52	9.71
502 HOURS	S	150.27	64.69	13.85	2.68
	A_3	0.24	0.03	0.32	0.47

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-8D

101 AIRPLANES 70986 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1176.54	326.40	68.29	11.47
S	490.92	154.19	37.61	7.70
A_3	0.55	0.48	0.72	1.25

93 AIRPLANES
49588 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	1380.67	394.15	107.24	22.87
S	468.87	79.59	21.81	6.83
A_3	2.59	0.29	0.19	0.71

15 AIRPLANES
1060 HOURS

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	826.64	216.72	45.39	8.03
S	398.11	118.51	30.75	5.85
A_3	0.83	0.90	1.13	1.50

46 AIRPLANES
19583 HOURS

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	546.18	88.42	8.42	4.32
S	71.24	22.70	5.19	6.09
A_3	0.78	0.56	1.85	2.38

11 AIRPLANES
758 HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-8E

248 AIRPLANES 198601 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
243 AIRPLANES	$\bar{X}$	1984.36	510.43	131.38	19.66
125946 HOURS	S	717.23	205.58	53.09	11.45
	A_3	1.87	1.59	1.62	2.23

COMBAT	4.0G	5.0G	6.0G	7.0G
103 AIRPLANES	$\bar{X}$	1074.97	372.62	92.68	17.22
27936 HOURS	S	193.19	101.22	41.20	15.20
	A_3	0.06	0.97	3.20	5.50

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
88 AIRPLANES	$\bar{X}$	1551.79	453.60	92.16	15.17
26217 HOURS	S	451.22	138.34	35.57	9.01
	A_3	0.49	0.04	0.50	1.61

COMBAT	4.0G	5.0G	6.0G	7.0G
52 AIRPLANES	$\bar{X}$	1334.99	460.44	118.91	19.35
18501 HOURS	S	373.35	123.04	28.68	8.02
	A_3	3.39	0.45	0.60	1.56

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL DF-8F

13 AIRPLANES 9599 HOURS

NAVY

TRAINING	4.0G	5.0G	6.0G	7.0G
13 AIRPLANES $\bar{X}$	405.48	91.31	11.23	0.82
3599 HOURS S	271.17	85.23	15.41	1.65
A_3	0.49	0.76	1.93	1.35

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL FF-1QB

16 AIRPLANES 9853 HOURS

NAVY

TRAINING	3.00	4.00	5.00	6.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

COMBAT	3.00	4.00	5.00	6.00
AIRPLANES $\bar{X}$	*			
HOURS S				
A_3				

MARINE

TRAINING	3.00	4.00	5.00	6.00
14 AIRPLANES $\bar{X}$	16.24	0.00	0.00	0.00
7526 HOURS S	10.06	0.00	0.00	0.00
A_3	-0.59	0.00	0.00	0.00

COMBAT	3.00	4.00	5.00	6.00
10 AIRPLANES $\bar{X}$	45.06	2.22	0.00	0.00
2327 HOURS S	**			
A_3				

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL F-11A

36 AIRPLANES 22538 HOURS

NAVY

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	2796.39	593.37	80.02	10.38
S	816.87	259.16	60.36	10.36
A_3	1.30	1.37	3.46	3.50

36 AIRPLANES
22538 HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

TRAINING	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	4.00	5.00	6.00	7.00
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 10 06-73

MODEL S-2D

67 AIRPLANES 59015 HOURS

NAVY

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	33.25	7.71	1.77	0.74
S	34.30	9.23	5.36	4.95
A_3	1.72	1.98	6.51	7.25

67 AIRPLANES
59445 HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	25.35	2.10	0.00	0.00
S	**			
A_3				

8 AIRPLANES
570 HOURS

MARINE

TRAINING	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

COMBAT	2.0G	2.5G	3.0G	3.5G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS
S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS
A_3 SKEWNESS OF LOAD RATE DISTRIBUTION
* NO DATA IN THIS CATEGORY
** INSUFFICIENT DATA IN THIS CATEGORY

ALL DATA
01-62 TO 06-73

MODEL T-2A

147 AIRPLANES 584869 HOURS

NAVY

147 AIRPLANES
584869 HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	591.14	44.72	4.84	0.89
S	446.55	58.91	6.48	2.09
A_3	0.74	1.99	1.83	2.81

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

MARINE

AIRPLANES
HOURS

TRAINING	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

COMBAT	4.0G	5.0G	6.0G	7.0G
$\bar{X}$	*			
S				
A_3				

AIRPLANES
HOURS

$\bar{X}$ MEAN CUMULATIVE COUNTS PER 1000 HOURS

S STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS

A_3 SKEWNESS OF LOAD RATE DISTRIBUTION

* NO DATA IN THIS CATEGORY

** INSUFFICIENT DATA IN THIS CATEGORY

APPENDIX B
THE DETERMINATION OF SAMPLE STATISTICS FOR COUNTING ACCELEROMETER DATA

AIR VEHICLE TECHNOLOGY DEPARTMENT
NAVAL AIR DEVELOPMENT CENTER
WARMINSTER, PA. 18974

Subj: The Determination of Sample Statistics for Counting Accelerometer Data

Ref: (a) Brownlee, K. A., "Statistical Theory and Methodology in Science and Engineering," Wiley 1965, pp. 358-359
(b) Dixon & Massey, Introduction to Statistical Analysis, McGraw-Hill, Second Edition, 1957, pp. 194-195

1. The purpose of this technical memorandum is to define and justify the methods used at NAVAIRDEVCEN in calculating statistics describing counting accelerometer data. The subsequent outlined sequence is repeated for each aircraft model, for each mission category, and for each g-level where there is sufficient data.

2. These are the methods used for determining sample statistics. Consider a scatter diagram of cumulative counts (at any g-level) vs. flight hours,

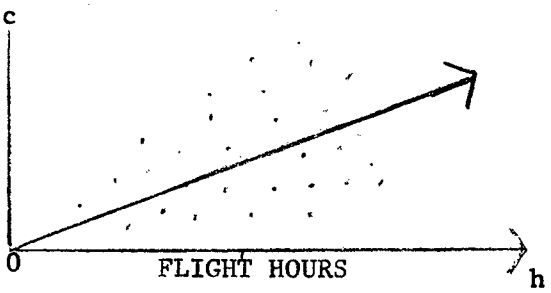

Figure 1

where each dot represents the cumulative counts and flight hours accrued by an individual serial number which is flying or has flown.

Let h_i be the total quality control accepted flight hours for the i^{th} plane (i=1, 2----N)

Let c_i be the cumulative counts during the h_i hours for the i^{th} plane (i=1, 2----N)

N is the total number of aircraft of this model and mission category for which there is recorded information.

Then

(1) $b = \dfrac{\sum_{i=1}^{N} c_i h_i}{\sum_{i=1}^{N} h_i^2}$ where b is slope of line (Figure 1) through origin fitted by least squares

(2) $\bar{x} = 1000b$ estimated mean load exceedances at 1000 hours

(3) $\bar{h} = \frac{\sum_{i=1}^{N} h_i}{N}$ average flight hours

(4) $\hat{\sigma}_{ch}^2 = \frac{\sum_{i=1}^{N} (c_i - bh_i)^2}{N-1}$ estimator of the population standard error squared of the regression

$\hat{\sigma}_{ch} = \sqrt{\hat{\sigma}_{ch}^2}$ estimator of the population standard error of the regression

(5) $S = \sqrt{1000 \ \hat{\sigma}_{ch}^2 / \bar{h}}$ estimated standard deviation (counts at 1000 hours) of the load exceedances for each g-level

(6) $A_3 = \frac{\sum_{i=1}^{N} (c_i - bh_i)^3}{N \hat{\sigma}_{ch}^3}$ estimated skewness

3. The following is the explanation and justification for these methods:

Aircraft which do not have any flight hours must have zero counts; therefore, the line in figure 2 must go through (0,0). Brownlee (reference (a)) describes the methods for fitting a least squares line through the origin (0,0). The slope of this line is the estimated mean exceedance rate (per hour). Multiplying this rate by 1000 will result in exceedances at 1000 hours (equation (2)). Multiplying b by any other h number of hours will result in mean exceedances at h hours.

If the data in figure 1 were separated into flight hour intervals (see figure 2) and the standard error in each interval were plotted against average flight hours (see figure 3) in that interval, the resultant curve is assumed to have the square root functional form.* Due to limitations in sample size, these individual $\hat{\sigma}$'s could not be determined accurately; thus, it was necessary to calculate a single $\hat{\sigma}_{ch}$ for all h combined and apply it at $\bar{h}$.** Equation (5) uses figure 3 to convert $\hat{\sigma}_{ch}$ at $\bar{h}$ to S at 1000 hours.

* This is partially justified by the fact that the variance of a sum of independent random variables is equal to the sum of the independent variances. Unreported statistical tests performed at NAVAIRDEVCEN show that figure 3 is a reasonable fit to actual data. It should be noted that the $\hat{\sigma}$'s in figure 2 are estimated by equation (4), but each $\hat{\sigma}$ was calculated using the data points in the respective interval.

**The estimated standard error $\hat{\sigma}_{ch}$ is used as the standard error of estimate for a hypothetical distribution of planes all having $\bar{h}$ hours. This follows from work in reference (b).

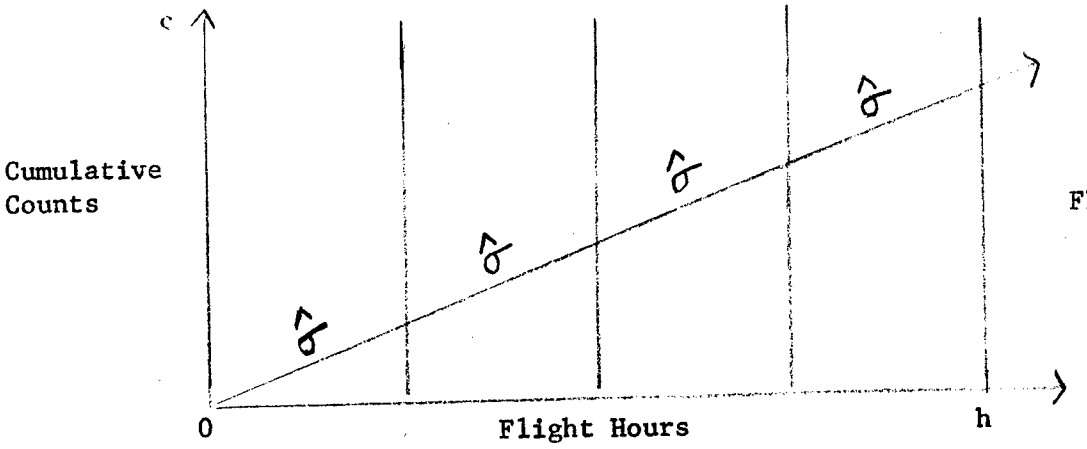

FIGURE 2

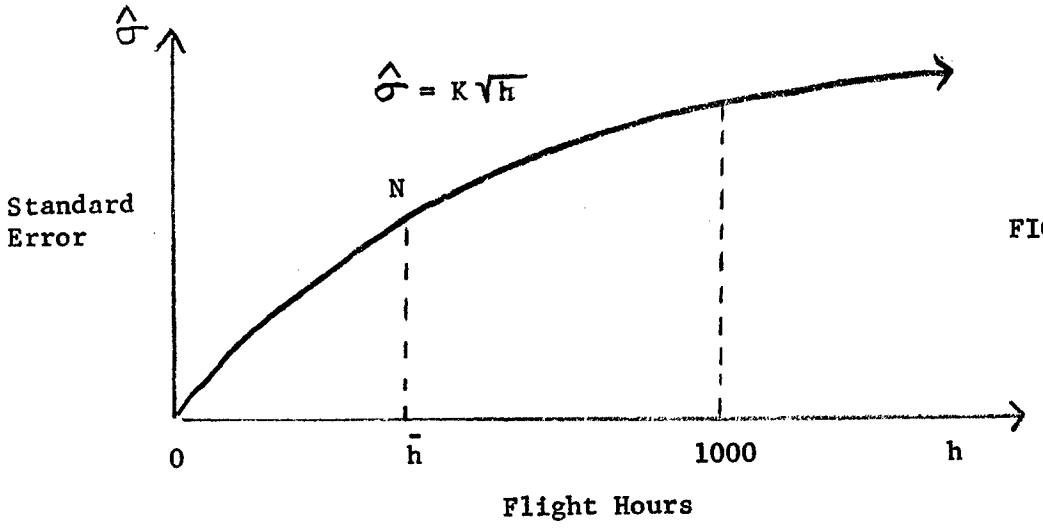

FIGURE 3

If one wanted the standard error at some other value of hours h, he would simply replace 1000 in equation (5) by that value of hours h, and the appropriate standard error would result.

Skewness A_3 is computed in equation (6). This measure indicates whether more airplane load exceedances are above the mean line or below the mean line. If:

$A_3 < 0$	More load exceedances are above mean line than below
$A_3 = 0$	Equal number of load exceedances above and below mean
$A_3 > 0$	More load exceedances are below mean line than above

(Strictly speaking a distribution is symmetrical only if all its odd moments are zero; however, the above statement is approximately true.)

4. For ease of computation, equation (4) can be expanded as follows:

$$(N-1)\,\hat{\sigma}_{ch}^2 = \sum_{i=1}^{N}(c_i - bh_i)^2$$

$$(N-1)\,\hat{\sigma}_{ch}^2 = \sum_{i=1}^{N}(c_i^2 - 2bc_ih_i + b^2h_i^2)$$

$$(7)\quad (N-1)\,\hat{\sigma}_{ch}^2 = \sum_{i=1}^{N} c_i^2 - 2b\sum_{i=1}^{N} c_ih_i + b^2\sum_{i=1}^{N} h_i^2$$

but

$$b = \frac{\sum_{i=1}^{N} c_ih_i}{\sum_{i=1}^{N} h_i^2}$$

and (7) can be reduced to

$$(N-1)\,\hat{\sigma}_{ch}^2 = \sum_{i=1}^{N} c_i^2 - 2b\sum_{i=1}^{N} c_ih_i + b\,\frac{\sum_{i=1}^{N} c_ih_i \sum_{i=1}^{N} h_i^2}{\sum_{i=1}^{N} h_i^2}$$

then

$$(8)\quad \hat{\sigma}_{ch}^2 = \left(\sum_{i=1}^{N} c_i^2 - b\sum_{i=1}^{N} c_ih_i\right) \Big/ (N-1)$$

Equation (8) will be used in lieu of equation (4) in determining $\hat{\sigma}_{ch}^2$.

5. An example using F-4G training Navy data, 12 airplanes 4.0G level:

Serial No.	Counts (c_i)	Hours (h_i)
150481	1567	1341.7
150484	649	618.2
150487	1114	1100.8
150489	5	27.3
150492	768	691.7
150625	23	139.6
150629	396	555.1
150633	718	831.3
150636	854	839.1
150639	536	695.4
150642	910	775.3
150645	160	233.0

The following are tabulated:

$$\sum_{i=1}^{N} h_i = 7848.5$$

$$\sum_{i=1}^{N} c_i = 7700$$

$$\sum_{i=1}^{N} c_i h_i = 6913341.6$$

$$\sum_{i=1}^{N} h_i^2 = 6735017.87$$

$$\sum_{i=1}^{N} c_i^2 = 7250716.00$$

$$\sum_{i=1}^{N} (c_i - bh_i)^3 = -7082690$$

and are used in the following equations:

(1) $b = \frac{6913341.6}{6735017.87} = 1.02647$ cts. per hr.

(2) $\bar{x} = 1000\ (1.02647) = 1026.47$ cts. at 1000 hrs.

(3) $\bar{h} = \frac{7848.5}{12} = 654.04$ hours

(8) $\hat{\sigma}_{ch}^2 = \frac{7250716 - 1.02647\ (6913341.6)}{11} = 14034$ $\qquad \hat{\sigma}_{ch} = 118.5$

(5) $S = \sqrt{1000\ (14034)/654} = 146.46$ cts. at 1000 hours.

(6) $A_3 = \frac{-7082690}{12\ (118.5)^3} = -.36$

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: RCS NADC 13920-2	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE *(and Subtitle)*: "Statistical Review of Counting Accelerometer Data for Navy and Marine Fleet Aircraft from 1 Jan 1962 to 1 July 1973"	5. TYPE OF REPORT & PERIOD COVERED: Semi-Annual Summary Report/ From 1 Jan 1962 to 1 Jul 1973
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s): Thomas A. DeFiore	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Air Vehicle Technology Department, Naval Air Development Center, Warminster, Pa. 18974	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: AIRTASK A53530/202/78012-74-84/ Work Unit No. 01
11. CONTROLLING OFFICE NAME AND ADDRESS: Naval Air Systems Command, Department of the Navy, Washington, D.C. 20361	12. REPORT DATE: 1 November 1973
	13. NUMBER OF PAGES: 134
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)*	15. SECURITY CLASS. *(of this report)*: UNCLASSIFIED
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

Counting Accelerometer Statistics; Calendar Time Separations; Training Navy; Combat Navy; Training Marine; Combat Marine

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

This report is a specialized summary of normal acceleration data recorded by counting accelerometers. Data are separated by calendar time and mission category. Only data reported in the counting accelerometer program are included.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-014-6601 |

DISTRIBUTION LIST (Concluded)

REPORT CONTROL SYMBOL NADC 13920-2

	No. of Copies
AFPLANTREPO, St. Louis, MO.	1
ASD, WPAFB, Ohio	
(Attn: ASZA)	1
(Attn: ASNFS)	1
(Attn: ASNFS/10)	1
(Attn: ASNFS/20)	1
AFFDL, WPAFB, Ohio (Code FDTR)	1
National Aviation Facilities Experimental Center, FAA, Atlantic City, N. J. (Code RD-851)	1
DDC	12
Boeing Co., Renton, Washington (Attn: R. Walter)	1
Grumman Aircraft Corp., Bethpage, N.Y.	
(Attn: Technical Library)	1
(Attn: A. Goode)	1
(Attn: W. King)	1
Lockheed-Cal[illegible]ia Co., Burbank, California.	
(Attn: Te[illegible]al Library)	1
(Attn: J.[illegible]ll)	1
Ling-Temco-V[illegible]t Corp., Dallas, Texas.	
(Attn: Te[illegible]cal Library)	1
(Attn: L.[illegible]well)	1
McDonnell Dou[illegible]s Corp., Long Beach, California	
(Attn: Tec[illegible]cal Library)	1
(Attn: F. I[illegible]kam)	2
North Americar[illegible]ockwell Corp., Columbus, Ohio	
(Attn: Tech[illegible]cal Library)	1
(Attn: J. J[illegible]Gruff)	1
Battelle Memor[illegible]l Institute, Columbus, Ohio	
(Attn: Dr.[illegible]Grover)	1
Brooks AFB, Sc[illegible]ol of Aviation Medicine	
(Attn: S. L[illegible]rett)	1
Cornell Aerona[illegible]cal Lab, Inc., Buffalo, N.Y.	1
Technology, I[illegible] Dayton, Ohio	
(Attn: C.[illegible]ham)	1
(Attn: K.[illegible]ey)	1
NAVAIRDEVCEN,[illegible]minster, Pennsylvania 18974	43
(3 for 813) (1 for 301)	
(3 for 3002)	
(1 for 03)	
(1 for 20) (1 for 304)	
(1 for 40) (1 for 305)	
(1 for 50) (28 for 3032)	

DISTRIBUTION LIST

REPORT CONTROL SYMBOL NADC 13920-2

AIRTASK A53530/202/78012-74-84
WORK UNIT NO. 01

	No. of Copies
NAVAIRSYSCOM, (AIR-50174). . . . . (2 for retention, 1 for AIR-03, 1 for AIR-05, 1 for AIR-04, 1 for AIR-04B, 1 for AIR-410, 1 for AIR-411, 1 for AIR-4117, 1 for AIR-1014, 1 for AIR-510, 1 for AIR-5102, 1 for AIR-5103, 1 for AIR-5105, 1 for AIR-4302, 1 for AIR-53022, 1 for AIR-530212, 1 for AIR-5314, 1 for AIR-5318, 1 for PMA-232-1, 1 for PMA-234, 1 for PMA-240, 1 for PMA-235 and 1 for PMA-246)	23
COMNAVAIRLANT (Code 50A1).	1
COMNAVAIRPAC	1
NAVAIRSYSCOMREPLANT.	1
NAVAIRSYSCOMREPAC	1
Naval Aviation Integrated Logistic Support Center, Patuxent River, MD..	1
COMRECONATKWING ONE	1
NAVAIREWORKFAC, ALAMEDA (Codes 300 and 310).	2
NAVAIREWORKFAC, Cherry Point (Codes 300 and 310)	2
NAVAIREWORKFAC, Jacksonville (Codes 300 and 310 and 05A) .	3
NAVAIREWORKFAC, Norfolk (Codes 300 and 310 and 05A). . . .	3
NAVAIREWORKFAC, North Island (Codes 300 and 310 and 05A) .	3
NAVAIREWORKFAC, Pensacola (Codes 300 and 310).	2
NAVAIREWORKFAC, Quonset Point (Codes 300 and 310).	2
COMFAIRWHIDBEY	1
COMFAIRNORFOLK	1
COMFAIRJAX	1
COMNAVSAFCEN	1
CNO (OP 512)	2
CNATRA	1
Commander, Naval Air Reserve, NAS, Glenview, Ill.	1
NRL, Washington, D.C.	1
[illegible]PLANTREPO, Bethpage, N.Y.	[illegible]
[illegible]PLANTREPO, Burbank, Califo[illegible]	[illegible]
NA[illegible]PLANTREPO, Colum[illegible]s, Ohio	[illegible]
N[illegible]PLANTREPO, Dall[illegible], Texas	1
[illegible]VPLANTREPO, Lon[illegible] Bea[illegible]h, C[illegible]fornia	1

CONTINUED ON INSIDE BACK COVER

730503A